

ABSTRACT

CONTROLLING BIREFRINGENCE IN AN OPTICAL WAVEGUIDE

A method of controlling birefringence in a rib waveguide structure manufactured in silicon is describes. The rib waveguide structure comprises an elongated rib element having an upper face and two side faces. According to the method, a blanket layer of silicon nitride is formed to a predetermined thickness over the rib waveguide structure directly abutting the upper face and side faces. The thickness of the blanket layer is selected to control birefringence. A silicon rib waveguide structure incorporating such a layer and a evanescent coupler structure are also described.